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In the Specification:

Please amend the indicated paragraphs as follows:

[0014] Examples of plasma enhanced semiconductor processing chambers that may be adapted to benefit from the present invention include the eMax™, MXP®, and ENABLER™ processing chambers, all available from Applied Materials, Inc. of Santa Clara, California. The eMax™ processing chamber is described in United States Patent No. 6,113,731, issued September 5, 2000 to Shan et al. The MXP® processing chamber is described in United States Patent No. 5,534,108, issued July 9, 1996 to Qian et al., and United States Patent No. 5,674,321, issued October 7, 1997 to Pu et al. The ENABLER™ processing chamber is described in United States Patent Application Serial No. 10/192,271, filed on July 9, 2002. Each of these above-mentioned patents are hereby incorporated by reference in their entireties.

[0016] The electrostatic chuck 126 is driven by a DC power supply 120 to develop an electrostatic force that holds the substrate on the chuck surface. The cathode 127 is coupled to a pair of RF bias sources 122, 123 through a matching network 124. The bias sources 122, 123 are generally capable of producing an RF signal having a frequency of from about 50 kHz to about 100 MHz and a power of between about 0 and about 10,000 Watts. The matching network 124 matches the impedance of the sources 122, 123 to the plasma impedance. A single feed 127 couples energy from both sources 122, 123 to the support pedestal 116. Alternatively, each source 122, 123 can be coupled to the cathode 127 via a separate feed.

[0017] The gas inlet 132 may comprise one or more nozzles or a showerhead. The gas inlet 132 may comprise a plurality of gas distribution zones such that various gases provided from a gas source 108 – which, when ignited, form a plasma 110 – can be supplied to the chamber body 102 using a specific gas distribution gradient. The gas inlet 132 may form an upper electrode 128 that

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opposes the support pedestal 116. The upper electrode 128 can be coupled to an RF source 118 through a matching network 119, terminated to a specific impedance, or grounded. The source 118 is generally capable of producing an RF signal having a frequency in the about 10 Mhz to about 3 GHz range and a power between about 0 and 10,000 Watts. In one embodiment, the source 118 is capable of producing an RF signal having a frequency of about 60 MHz. The RF energy supplied by the source is generally used to facilitate dissociation and ionization of gases in the plasma.

[0020] The frequency dependence of ion energy distribution within a plasma chamber is well known. Figure 2, taken from IEEE Trans. Plasma Sci., Vol. 19, No. 2, page 242, depicts a series of graphs 200₁₋₇ of histograms (along the Y axes) of known ion energy distributions (along the X axes) as a function of drive frequencies (along the Z axis). As can be seen in the graphs 240₁₋₇ 200₁₋₇, the ion energy distribution associated with lower frequencies has a broader energy bandwidth (e.g., distribution 210₁ in graph 200₁), while higher frequencies have a progressively much more concentrated energy bandwidth (e.g., distribution 210₇ in graph 200₇). The relationship is generally continuous along the spectrum moving from the low frequency ion energy distribution to the high frequency ion energy distribution (e.g., compare distributions 210₁₋₇ from graphs 240₁₋₇ 200₁₋₇).

[0031] However, the remaining graphs depicting other ratios where both the high and the low RF frequencies were mixed together reveal an important result. These graphs show the exact same trend as if individual intermediate frequencies were selected, as can be seen by comparison of the graphs 300₁₋₅ to the histograms depicted in the graphs 240₁₋₇ 200₁₋₇ of Figure 2. This shows how a desired distribution along a continuum of individual low to high frequency RF sources may be obtained by utilizing only two sources, rather than many sources. This result increases the capability to perform more processes in one chamber, i.e., increases the "process window" of the chamber.

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[0037] Figure 5 depicts a combined bar graph and line graph 500 depicting the etch rates and wafer uniformity for the processes described above. The x-axis 502 of the graph depicts the ratio of the power supplied by the 13.56Mhz source to the power supplied by the 2Mhz source. (For example 0:2500 means 0W of the 13.56 MHz source and 2,500W of the 2 MHz source.) As can be seen from the bars 510 labeled OX ER (oxide etch rate) and the bars 512 labeled PR ER (photoresist etch rate), the etch rate (axis 504) remains relatively constant regardless of the mix of power levels at the different frequencies.

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